

Dkt. No. ET00-007CIP

## PATENTS

other words, INSS must identify which terms and inputs relate to which party and are significant to the Pareto-optimal analysis in order to generate meaningful results. " This point had not been raised in the prior rejection, and is one of the bases for this request for continued examination.

Applicants respectfully disagree. INSS is not a negotiations system, it is not analyzing terms during iterative processing to understand the purpose of the terms, it does not identify which terms relate to which party, it does not recognize changes in terms, and it does not recognize at least one party as a deciding entity.

The INSS system does not do any analysis to "understand the purpose of terms to generate a Pareto-optimal agreement for both parties, nor does it identify which terms and inputs relate to which party and are significant to the Pareto-optimal analysis". The INSS article makes clear in discussing how to "Describe a new negotiation case", that all the terms and values for the mock negotiations are provided to the INSS system by whoever builds the case before any mock negotiation begins. As will be seen, this eliminates the need for any analysis of terms to understand their purpose, whether to simulate a negotiation, to generate a Pareto-optimal agreement or to identify which terms and inputs are significant to a Pareto-optimal analysis.

In fact, the INSS article makes it quite clear that the values assigned to terms (called options (values) and issues (similar to terms) in INSS) are irrelevant to its Pareto "analysis". While sounding complex, a Pareto-optimal agreement is nothing more than one which could not be improved for one party without making it worse for the other.

Page 2 of 27

Dkt. No. ET00-007CIP

PATENTS

Historically, negotiation support systems (NSS) might have attempted to perform an objective analysis of the values of the terms in an agreement to determine this. That is, they might have tried to find an agreement say, with better price terms for both parties than the one they agreed upon. This could be useful if price is the most important factor for both parties. However, it is often the case that objective measures such as price or delivery times are not as important to the parties as other, more subjective factors.

Thus some modern NSS systems typically do not attempt objective analysis of terms at all. Instead, they rely solely, as INSS expressly does (as will be seen below), on subjective ratings which the users supply. Thus it is irrelevant which agreement might "objectively" be better or optimal for both parties. It is also irrelevant which terms are significant for Pareto optimality for two reasons. First, INSS doesn't analyze the terms (issues and options in INSS), for Pareto analysis—it only looks at ratings. Second, the users of INSS are asked to rate all the terms and combinations and values—thus no one term (issue) or value (option) is more significant than another—all get ratings. As will be seen, this makes the computation of Pareto-optimality a simple arithmetic problem of comparing ratings that does not require analyzing terms (issues and options) at all.

To see this, it helps to understand how INSS works and its terminology. At INSS page 6, under the heading "Describe a new negotiation case", the article states:

"You can request that a new negotiation case be set up for you by submitting this form.  
**Specify the issues**

At a minimum you must specify the names of the issues that will be negotiated, and the options that each issue may take. For example:

Page 3 of 27

Dkt. No. ET00-007CIP

PATENTS

"Annual salary" – "50,000", "70,000" or "100,000" dollars.  
"Vacation" – 2, 4 or 6 weeks." [Underlining emphasis added.]

In the glossary of the INSS article on page 19, an issue is defined as:

"A topic of discussion that is of particular interest in a negotiation. Each issue has a range of alternatives or options, one of which must ultimately be agreed upon by the negotiators in order to achieve a compromise."

And at Page 20, an option is defined as:

"One of the alternative values that an issue can take. For example, the issue "Tolerable product failure rate" may have the options "3%", "5%" and "10%".

In other words, an issue is similar to a term in a real negotiation. However, because this is a simulation using a simulation model or case, as seen here, all the possible values for an issue (term) must be defined in advance. In this instance, these values are supplied as what INSS calls "options". As noted above, the article says that to create a new case you must, at a minimum, specify the names of the issues that will be negotiated, and the options that each issue may take.

Again, on Page 8, under the headings "Using INSS: An Example", and "Negotiations between Maki and Suny", the article describes a sample negotiation case which has been set up by the article's authors to show how to use INSS:

"There are only two issues in this simple negotiation: the *price* of the aircraft and the terms of the *warranty*. It has been established that the normal price of this aircraft is in the range of \$300,000 to \$320,000. The sensible increase is of \$10,000. Thus, the price *options* are \$300,000, \$310,000, and \$320,000. In this industry there are four types of *warranty* typically available. The options are: no warranty, a 6 month, one year, and a 2 year warranty.

Page 4 of 27

Dkt. No. ET00-007CIP

PATENTS

Both negotiators analyze the two issues and their associated options in terms of their relevance to their respective organizations and move to the pre-negotiation phase. [Underlining emphasis added.]

As the rest of this example shows, all the possible terms and all the possible values (issues and options in INSS terminology) of this negotiation are already in the model as some combination of the two issues (terms) with their respective options (values).

In this aircraft example, from the INSS article there would be 12 possible sets of issues and options that would make up an aircraft model:

**AIRCRAFT MODEL:**

Package No.	Issue 1	Issue 2	Maki's rating	Suny's rating
1	\$300,000	0	30*	70*
2	\$300,000	6 mos.	15*	80*
3	\$300,000	1 yr	20*	100*
4	\$300,000	2 yr	0*	90*
5	\$310,000	0	50*	40*
6	\$310,000	6 mos.	40*	50*
7	\$310,000	1 yr	30*	60*
8	\$310,000	2 yr	25*	30*
9	\$320,000	0	100	0*
10	\$320,000	6 mos.	75	20*
11	\$320,000	1 yr	90	15*
12	\$320,000	2 yr	60	10*

\* Ratings marked with an asterisk are hypothetical and not taken from the INSS article.

Again, in the glossary at Page 20, a package is defined as

"A particular combination of options that has been selected across all the issues. For example,

Price	3000\$
Payment	Upon Delivery
Failure rate	5%

Dkt. No. ET00-007CIP

## PATENTS

Thus it can be seen that for each case used for the mock negotiations using the INSS simulation system, all the variables are known ahead of time and inserted into the case or model by issue name and option value prior to any mock negotiation. For the aircraft model, issue (term) one can have three options (values)--\$300,000, \$310,000 or \$320,000. Issue (term) 2 can have four options (values): 0, 6 months, 1 year or 2 years. The combination of three options (values) for issue 1 and four options (values) for issue 2 results in 12 possible outcomes or packages, as seen above. They can be stored in the computer in a simple table similar to aircraft model shown above, or in similar arrangements in a file. Not only is there no disclosure of analysis by the INSS simulator to understand the purpose of the terms in the INSS article, there is no need or requirement for analysis to understand the purpose of the terms, or in the case of INSS, the issues, since all of their possible values (options) must already be known ahead of time by the simulator.

In the two examples cited in the INSS article, it does not matter whether the name of issue 1 in case 1 is annual salary or as in the aircraft model, issue 1 is named price. What matters is that all the possible options or values for that issue number are specified ahead of time so the case can be built. The simulator neither knows nor cares that it is simulating a price negotiation as opposed to a salary negotiation. It does not analyze terms or need to analyze them, during a mock negotiation, since they are predefined in the model as issues and options. All that is needed for the INSS simulator to operate is a set of pre-defined issues (terms) and options (values).

This pre-definition is made even clearer on Page 17, where the INSS article states, under the heading "INSS FAQ (Frequently Asked Questions)", question no. 2:

Page 6 of 27